DM508 – Algorithms and Complexity – 2013
Lecture 3

Lecture, April 9

We finished sections 3.2 and 3.3 of the DM508 notes, plus median finding from chapter 9 (section 9.3) in the textbook.

Lecture, April 15

We will cover the lower bound on median finding from section 3.5 in the DM508 notes. We will begin on NP-completeness, from chapter 34 in the textbook and the section by Papadimitriou and Steiglitz from the course notes, defining P and NP and reductions.

Lecture, April 17

We will continue with NP-Completeness, showing that 3-SAT, CLIQUE, and HAMILTO-NIAN CIRCUIT are NP-Complete. problems.

Problems to be discussed on April 23

Do problems:

1. 34.2-8.

2. 34.3-7 (34.3-6 has the definition of complete you need).

3. 34.4-4, 34.4-5, 34.4-6, 34.4-7.

4. 34.5-1, 34.5-2 (for 34.5.2, try a reduction from Vertex Cover, too).

If not all problems are finished, the most important ones missed will be done later.